

In re Patent Application of:

**FOX ET AL.**

Serial No. **09/500,108**

Filing Date: **2/8/00**

**REMARKS**

Claims 1-36 remain in this application. No claims have been amended. Claim 7 was previously amended. No claims have been cancelled.

Applicants thank the Examiner for the detailed study of the application and prior art and note that the Examiner considered the affidavit filed on February 9, 2004 Under 37 CFR §1.131 as ineffective to overcome U.S. Patent No. 6,415,321 to Gleichauf et al. (hereinafter "Gleichauf"). The Examiner states that there is not sufficient evidence on the exhibits supplied by the Applicants to demonstrate that the work was completed before the filing date of the Gleichauf reference. For example, the Examiner notes that Exhibits 1-6 should have a date of publication associated with each exhibit so that it can be ascertained that the documents were conceived before the filing date of Gleichauf.

Applicants submit a Supplemental Declaration Under 37 CFR §1.131 that now conclusively shows that not only did the inventors conceive the claimed invention prior to the Gleichauf filing date, but also conclusively shows that the inventors had reduced to practice the claimed invention before the Gleichauf filing date. The Supplemental Declaration includes previously submitted Exhibits 1-6, but also includes new Exhibit 01 dated September 25, 1998; Exhibit 1A dated November 1998; and Exhibit 3A dated January 1999.

Exhibit 01 clearly shows that core concepts had been developed for the architecture of the claimed invention. Exhibit 01 shows the different tool inputs, for example, network vulnerability analysis programs. The system creates a database that represents the network and uses various engines

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that are selected concerning the disparate network vulnerability/risk analysis programs. Data is combined/correlated to reach a unified report as a simple answer.

Exhibit 1A is dated November 1998, before the effective date of December 29, 1999, and clearly shows that the inventors had begun to develop the detailed software for the network vulnerability system that assesses the security posture of a network as claimed. For example, the first part of the exhibit under the title of Architecture Concept shows different core components of data storage and the use of plugins for autonomous tools of problem domain specific applications. The analysis flow diagram shows that there can be manual or automatic input for system description data and different results imported from risk assessment tools corresponding to the different analysis programs. Data fusion and description data validation can occur to determine inconsistencies. Any required data can be exported to the risk assessment tools.

In Exhibit 1A, the slides that are titled Neural Network/Learning Systems, Fuzzy Logic Systems, and Fuzzy Technologies, show an example of correlation used in the present claimed invention. An example of a software program used by the inventors when reducing to practice the present claimed invention was FuzzyCLIPS. Examples of the software logic are in the CLIPS and FuzzyCLIPS section of this Exhibit. The section entitled, "CLIPS-Rules" and the following slides show that software logic was already developed by the time Exhibit 1A was printed in November 1998. Also, the pages titled "FuzzyCLIPS Concepts" sets forth the logic that was

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used in the software. The section titled Task No. 6 shows a proof-of-concept prototype that had been developed. Those slides describe simple working examples, for example, the testing of the present claimed invention by using an internet scanner, ANSSR and RAM. The graphical user interface was developed at this time (before December 29, 1998) and is described in Exhibit 1A at sections titled Automatic Discovery Manual, Network Diagram, and Network Node Evaluation. These slides show that the inventors had reduced to practice the claimed invention by November 1998, before the effective December 29, 1998 date.

Exhibit 2 was also produced before December 29, 1998. It is a short abstract by two co-inventors of the present invention. This abstract explains how the inventors through their corporate entity had been conducting research for a single topological model to support multiple vulnerability analysis tools and the notes beginning of prototype development again emphasizing the reduction to practice of the claimed invention. Exhibit 3 was also produced before December 29, 1998, and sets forth different prototype design notes emphasizing again the reduction to practice.

Exhibit 3A are notes of a Technical Interchange Meeting just after the effective date of Gleichauf. This exhibit shows further development, for example, clearly showing the design enhancements in the graphical user interface and node representation. It shows further software development as set forth by the logic diagrams and prototype architecture.

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Later development was completed and included enhancements to the architecture as shown in Exhibit 4, showing fuzzy fusion as operative with the system object model. Exhibit 5 is similar to Exhibit 4 and shows the fuzzy fusion process in greater detail. Exhibit 6 is a white paper describing a brief overview of the system vulnerability analysis with the network visualization tool of the present invention.

The exhibits set forth in this Supplemental Declaration conclusively show that not only had the inventors conceived the claimed invention prior to December 29, 1998, the effective date of U.S. Patent No. 6,415,321 to Gleichauf, et al., but also the inventors had reduced to practice the invention before December 29, 1998, as noted by the logic examples, software examples, and the graphical user interface slides of Exhibit 1A, including other logic diagrams for the fuzzy logic and/or fusion that would be used for correlating data results of the network vulnerability analysis programs and determining the security posture of the network.

As to U.S. Patent No. 5,751,965 to Mayo et al. (hereinafter "Mayo"), Applicants agree that it discloses a graphical user interface as a network modeled as a map. Mayo is directed, however, to network management of connections to other relationships among entities making up a communications network. In Mayo, the conditions of the relationship can be color coded. These conditions could be indicative of an operational status, a faulty status, an unknown status, a disabled status, or a not communicating status. Nowhere does Mayo suggest the present claimed invention of assessing a security posture of a network by creating a system object

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model database, exporting the database to disparate network vulnerability/risk analysis programs, analyzing the network, and correlating data results to determine the security posture of the network. Indeed, Mayo suggests a graphical user interface as operative with coordinated devices and not disparate programs, as in the present claimed invention.

As to the cited U.S. Patent No. 5,787,235 to Smith et al. (hereinafter "Smith"), it is directed to a fuzzy logic-based evidence fusion tool for network analysis, and more particularly, for predicting function levels of a switch in a telecommunications network. A fuzzy map is established with a confidence factor for a switch and a degree of truth for each rule at a functional level of the switch. It is established by applying a set of fuzzy evidence fusion rules and determining the maximum combined confidence factor and assigning to the switch a function level corresponding to the maximum confidence factor.

At most, the combination of Mayo and Smith would suggest a graphical user interface of a telephone switch in which different function levels can be color coded. Nowhere do the cited references either singularly or in combination suggest the present claimed invention.

Also submitted is an Information Disclosure Statement that lists an additional prior art reference, U.S. Patent No. 6,298,445, corresponding to previously cited WO 99/56195, cited by the Examiner in the related copending patent application serial no. 09/500,267, filed February 8, 2000, the title of which is listed at the end of the detailed description on page 31.

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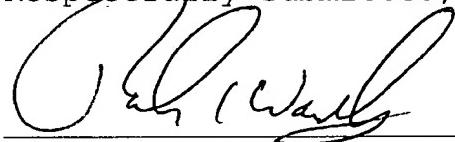
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Applicants submit that the present case is in condition for allowance and respectfully requests that the Examiner issue a Notice of Allowance and Issue Fee Due. If the Examiner has any questions or suggestions for placing this case in condition for allowance, the undersigned attorney would appreciate a telephone call.

Respectfully submitted,



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**CERTIFICATE OF MAILING**

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22313-1450**, on this 26<sup>th</sup> day of July, 2004.

